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Evaluation of the relationship between intensity and effluent temperature in a solar still

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In this research, the exit treated wastewater from the gravity filtration unit, mechanical and chemical treatment unit, biological treatment unit and finally UV disinfection treatment unit enters to a solar desalination unit. Wastewater evaporation process is performed in this unit. In this study, in order to increase the UV waves in solar energy, nano-flooring has been used on the floor of the solar pond. The laboratory results show that the average difference between the experimental data and the theory for simple coating, coating made of zinc oxide nanoparticles and coating made of aluminum oxide nanoparticles is equal to 2%, 2.3% and 1.6%, respectively. The laboratory results show that the maximum and minimum temperature difference of the first layer and the last layer of wastewater are in April and March, respectively[1].

Keywords: Radiation Intensity; Temperature; Saline Wastewater; Nanoparticles.

[1] Muhammad. T, Rana. M. N. J, Amani. Al-O, Fares. A, *Energy Conversion and Management*, **2023**, 289, 117180.